

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

I. AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-104. (Cancelled)

105. (New) A method for filling a cigarette tube with tobacco, comprising not necessarily in sequence:

metering loose tobacco from a hopper to a compression chamber;
compressing the loose tobacco in the compression chamber; and
injecting the compressed tobacco from the compression chamber to a cigarette tube in communication with the compression chamber,
wherein the metering, compressing, and injecting steps are respectively automated by a metering motor, a compression motor, and an injection motor.

106. (New) The method of claim 105, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.

107. (New) The method of claim 106, further comprising assessing the status of a second switch to determine whether the compression is complete.

108. (New) The method of claim 107, further comprising querying the first switch only after the second switch has been engaged.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

109. (New) The method of claim 105, wherein compression is performed by a compression member moveable along a first axis, and wherein the compression member is coupled to the compression motor by a spring which allows the position of the compression member to vary along the first axis in response to a load provided by compressing the tobacco.

110. (New) The method of claim 109, wherein the variance in the position of the compression member in response to the load selectively changes the status of a first switch.

111. (New) The method of claim 110, further comprising assessing the status of a second switch to determine whether the compression is complete.

112. (New) The method of claim 111, further comprising querying the first switch only after the second switch has been engaged.

113. (New) The method of claim 105, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.

114. (New) The method of claim 105, wherein the metering and compression steps are performed in alternating fashion prior to the injection step.

115. (New) The method of claim 105, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber during each compression step.

116. (New) The method of claim 105, further comprising automating the metering, compression, and injecting steps in accordance with an algorithm.

117. (New) The method of claim 116, wherein the algorithm further assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

118. (New) The method of claim 117, wherein the algorithm provides for an additional metering step if an insufficient quantity of tobacco has been assessed.

119. (New) The method of claim 105, wherein the metering step comprises reciprocation of a metering member through a plurality of strokes using the metering motor.

120. (New) The method of claim 105, wherein the tobacco is metered along a first axis, the tobacco is compressed along a second axis, and the tobacco is injected along a third axis, and wherein the first, second, and third axes are all orthogonal to each other.

121. (New) The method of claim 105, wherein the compression step further comprises affixing the cigarette tube in communication with the compression chamber.

122. (New) The method of claim 105, further comprising, prior to the metering, compression, and injection steps, affixing the cigarette tube in communication with the compression chamber.

123. (New) The method of claim 105, further comprising biasing the loose tobacco downward in the hopper.

124. (New) The method of claim 105, wherein the tobacco is injected only after verification that the compressed tobacco in the compression chamber is of a suitable quantity.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

125. (New) A method for filling a cigarette tube with tobacco, comprising not necessarily in sequence:

metering loose tobacco from a hopper to a compression chamber;
compressing the loose tobacco in the compression chamber;
determining whether a sufficient quantity of tobacco has been compressed in the compression chamber; and
injecting the compressed tobacco from the compression chamber to a cigarette tube in communication with the compression chamber.

126. (New) The method of claim 125, wherein determining whether a sufficient quantity of tobacco has been compressed in the compression chamber further comprises assessing the status of a first switch during compression.

127. (New) The method of claim 126, further comprising assessing the status of a second switch to determine whether the compression is complete.

128. (New) The method of claim 127, further comprising querying the first switch only after the second switch has been engaged.

129. (New) The method of claim 125, wherein the metering, compressing, and injecting steps are respectively automated by a metering motor, a compression motor, and an injection motor.

130. (New) The method of claim 129, wherein compression is performed by a compression member moveable along a first axis, and wherein the compression member is coupled to the compression motor by a spring which allows the position of the compression member to vary along the first axis in response to a load provided by compressing the tobacco.

131. (New) The method of claim 130, wherein the variance in the position of the compression member in response to the load selectively changes the status of a first switch.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

132. (New) The method of claim 131, further comprising assessing the status of a second switch to determine whether the compression is complete.

133. (New) The method of claim 132, further comprising querying the first switch only after the second switch has been engaged.

134. (New) The method of claim 125, wherein the metering and compression steps are performed in alternating fashion prior to the injection step.

135. (New) The method of claim 125, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber during each compression step.

136. (New) The method of claim 125, further comprising automating the metering, compression, and injecting steps in accordance with an algorithm.

137. (New) The method of claim 136, wherein the algorithm further assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.

138. (New) The method of claim 137, wherein the algorithm provides for an additional metering step if an insufficient quantity of tobacco has been assessed.

139. (New) The method of claim 125, wherein the metering step is automated.

140. (New) The method of claim 125, wherein the metering step comprises reciprocation of a metering member through a plurality of strokes.

141. (New) The method of claim 140, wherein the metering member is moveable by a motor.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

142. (New) The method of claim 140, wherein the metering member is moveable by a rotating crank arm.

143. (New) The method of claim 125, wherein the tobacco is metered along a first axis, the tobacco is compressed along a second axis, and the tobacco is injected along a third axis, and wherein the first, second, and third axes are all orthogonal to each other.

144. (New) The method of claim 125, wherein the compression step further comprises affixing the cigarette tube in communication with the compression chamber.

145. (New) The method of claim 125, further comprising, prior to the metering, compression, and injection steps, affixing the cigarette tube in communication with the compression chamber.

146. (New) The method of claim 125, further comprising biasing the loose tobacco downward in the hopper.

147. (New) The method of claim 125, wherein the metering and compression steps are both performed using a first member.

148. (New) The method of claim 147, further comprising automating the movement of the first member and automating the injection step.

149. (New) The method of claim 148, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.

150. (New) The method of claim 149, further comprising assessing the status of a second switch to determine whether the compression is complete.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

151. (New) The method of claim 150, further comprising querying the first switch only after the second switch has been engaged.

152. (New) The method of claim 148, wherein compression is performed by the first member moving along a first axis, and wherein the first member is coupled to a motor by a spring which allows the position of the first member to vary along the first axis in response to a load provided compressing the tobacco.

153. (New) The method of claim 152, wherein the variance in the position of the first member in response to the load selectively changes the status of a first switch.

154. (New) The method of claim 153, further comprising assessing the status of a second switch to determine whether the compression is complete.

155. (New) The method of claim 147, further comprising reciprocating the first member through a plurality of strokes.

156. (New) The method of claim 147, further comprising automating the movement of the first member and automating the injecting step in accordance with an algorithm.

157. (New) The method of claim 156, wherein the algorithm assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.

158. (New) The method of claim 157, wherein the algorithm provides for additional metering by the first member if an insufficient quantity of tobacco has been assessed.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

159. (New) The method of claim 147, wherein the first member is moveable along a first axis, and wherein the tobacco is injected along a second axis, and wherein the first and second axes are orthogonal to each other.

160. (New) The method of claim 147, wherein the compression chamber is essentially cylindrical and has a gap on its upper surface, and wherein the first member has an edge which interfaces with the compression chamber at the gap.

161. (New) The method of claim 160, wherein the edge of the first member is semicircular.

162. (New) A method for filling a cigarette tube with tobacco, comprising not necessarily in sequence:

metering loose tobacco from a hopper to a compression chamber;
compressing the loose tobacco in the compression chamber; and
injecting the compressed tobacco from the compression chamber to a cigarette tube in communication with the compression chamber,
wherein the metering, compression, and injecting steps are automated in accordance with an algorithm.

163. (New) The method of claim 162, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.

164. (New) The method of claim 163, further comprising assessing the status of a second switch to determine whether the compression is complete.

165. (New) The method of claim 164, further comprising querying the first switch only after the second switch has been engaged.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

166. (New) The method of claim 162, wherein the automation comprises control of a metering motor, a compression motor, and an injection motor.

167. (New) The method of claim 166, wherein compression is performed by a compression member moveable along a first axis, and wherein the compression member is coupled to the compression motor by a spring which allows the position of the compression member to vary along the first axis in response to a load provided by compressing the tobacco.

168. (New) The method of claim 167, wherein the variance in the position of the compression member in response to the load selectively changes the status of a first switch.

169. (New) The method of claim 168, further comprising assessing the status of a second switch to determine whether the compression is complete.

170. (New) The method of claim 169, further comprising querying the first switch only after the second switch has been engaged.

171. (New) The method of claim 162, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.

172. (New) The method of claim 162, wherein the metering and compression steps are performed in alternating fashion prior to the injection step.

173. (New) The method of claim 162, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber during each compression step.

174. (New) The method of claim 162, wherein the algorithm further assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

175. (New) The method of claim 174, wherein the algorithm provides for an additional metering step if an insufficient quantity of tobacco has been assessed.
176. (New) The method of claim 162, wherein the metering step comprises reciprocation of a metering member through a plurality of strokes.
177. (New) The method of claim 176, wherein the metering member is moveable by a motor.
178. (New) The method of claim 162, wherein the tobacco is metered along a first axis, the tobacco is compressed along a second axis, and the tobacco is injected along a third axis, and wherein the first, second, and third axes are all orthogonal to each other.
179. (New) The method of claim 162, wherein the compression step further comprises affixing the cigarette tube in communication with the compression chamber.
180. (New) The method of claim 162, further comprising biasing the loose tobacco downward in the hopper.
181. (New) The method of claim 162, wherein the metering and compression steps are both performed using a first member.
182. (New) The method of claim 181, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.
183. (New) The method of claim 182, further comprising assessing the status of a second switch to determine whether the compression is complete.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

184. (New) The method of claim 183, further comprising querying the first switch only after the second switch has been engaged.

185. (New) The method of claim 181, wherein compression is performed by the first member moving along a first axis, and wherein the first member is coupled to a motor by a spring which allows the position of the first member to vary along the first axis in response to a load provided compressing the tobacco.

186. (New) The method of claim 185, wherein the variance in the position of the first member in response to the load selectively changes the status of a first switch.

187. (New) The method of claim 186, further comprising assessing the status of a second switch to determine whether the compression is complete.

188. (New) The method of claim 187, further comprising querying the first switch only after the second switch has been engaged.

189. (New) The method of claim 181, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.

190. (New) The method of claim 181, further comprising reciprocating the first member through a plurality of strokes.

191. (New) The method of claim 181, wherein the algorithm assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.

192. (New) The method of claim 191, wherein the algorithm provides for additional metering by the first member if an insufficient quantity of tobacco has been assessed.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

193. (New) The method of claim 181, wherein the first member is moveable along a first axis, and wherein the tobacco is injected along a second axis, and wherein the first and second axes are orthogonal to each other.

194. (New) The method of claim 181, wherein the compression chamber is essentially cylindrical and has a gap on its upper surface, and wherein the first member has an edge which interfaces with the compression chamber at the gap.

195. (New) The method of claim 194, wherein the edge of the first member is semicircular.

196. (New) The method of claim 162, wherein the tobacco is injected only after verification that the compressed tobacco in the compression chamber is of a suitable quantity.

197. (New) A method for filling a cigarette tube with tobacco, comprising not necessarily in sequence:

metering loose tobacco from a hopper to a compression chamber;
compressing the loose tobacco in the compression chamber; and
injecting the compressed tobacco from the compression chamber to a cigarette tube in communication with the compression chamber,
wherein the metering step is automated, and wherein the compression and injection steps are manual.

198. (New) The method of claim 197, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.

199. (New) The method of claim 197, further comprising automating the metering step in accordance with an algorithm.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

200. (New) The method of claim 199, wherein the algorithm provides for an additional metering step if an insufficient quantity of tobacco has been assessed.
201. (New) The method of claim 197, wherein the compression and injection steps comprise rotating a crank arm.
202. (New) The method of claim 201, wherein rotating the crank arm performs the compression step before the injection step.
203. (New) The method of claim 197, wherein the metering step comprises reciprocation of a metering member through a plurality of strokes.
204. (New) The method of claim 203, wherein the metering member is moveable by a motor.
205. (New) The method of claim 197, wherein the tobacco is metered along a first axis, the tobacco is compressed along a second axis, and the tobacco is injected along a third axis, and wherein the first, second, and third axes are all orthogonal to each other.
206. (New) The method of claim 197, further comprising biasing the loose tobacco downward in the hopper.
207. (New) A method for filling a cigarette tube with tobacco, comprising not necessarily in sequence:
- metering loose tobacco from a hopper to a compression chamber by reciprocating a metering member through a plurality of strokes by rotating a crank arm;
 - compressing the loose tobacco in the compression chamber; and
 - injecting the compressed tobacco from the compression chamber to a cigarette tube in communication with the compression chamber.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

208. (New) The method of claim 207, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.

209. (New) The method of claim 208, further comprising assessing the status of a second switch to determine whether the compression is complete.

210. (New) The method of claim 209, further comprising querying the first switch only after the second switch has been engaged.

211. (New) The method of claim 207, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.

212. (New) The method of claim 207, wherein the metering and compression steps are performed in alternating fashion prior to the injection step.

213. (New) The method of claim 207, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber during each compression step.

214. (New) The method of claim 207, further comprising automating the compression and injecting steps in accordance with an algorithm.

215. (New) The method of claim 214, wherein the algorithm further assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.

216. (New) The method of claim 207, wherein the compression and injection steps are manual.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

217. (New) The method of claim 216, wherein the compression and injection steps comprise rotating a crank arm.

218. (New) The method of claim 207, wherein the tobacco is metered along a first axis, the tobacco is compressed along a second axis, and the tobacco is injected along a third axis, and wherein the first, second, and third axes are all orthogonal to each other.

219. (New) The method of claim 207, further comprising biasing the loose tobacco downward in the hopper.

220. (New) A method for filling a cigarette tube with tobacco, comprising not necessarily in sequence:

metering loose tobacco from a hopper to a compression chamber;

compressing the loose tobacco in the compression chamber; and

injecting the compressed tobacco from the compression chamber to a cigarette tube in communication with the compression chamber,

wherein the tobacco is metered along a first axis, the tobacco is compressed along a second axis, and the tobacco is injected along a third axis, and wherein the first, second, and third axes are all orthogonal to each other.

221. (New) The method of claim 220, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.

222. (New) The method of claim 221, further comprising assessing the status of a second switch to determine whether the compression is complete.

223. (New) The method of claim 222, further comprising querying the first switch only after the second switch has been engaged.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

224. (New) The method of claim 220, wherein the metering, compressing, and injecting steps are respectively automated by a metering motor, a compression motor, and an injection motor.

225. (New) The method of claim 224, wherein compression is performed by a compression member moveable along a first axis, and wherein the compression member is coupled to the compression motor by a spring which allows the position of the compression member to vary along the first axis in response to a load provided by compressing the tobacco.

226. (New) The method of claim 225, wherein the variance in the position of the compression member in response to the load selectively changes the status of a first switch.

227. (New) The method of claim 226, further comprising assessing the status of a second switch to determine whether the compression is complete.

228. (New) The method of claim 227, further comprising querying the first switch only after the second switch has been engaged.

229. (New) The method of claim 220, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.

230. (New) The method of claim 220, wherein the metering and compression steps are performed in alternating fashion prior to the injection step.

231. (New) The method of claim 220, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber during each compression step.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

232. (New) The method of claim 220, further comprising automating the metering, compression, and injecting steps in accordance with an algorithm.
233. (New) The method of claim 232, wherein the algorithm further assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.
234. (New) The method of claim 233, wherein the algorithm provides for an additional metering step if an insufficient quantity of tobacco has been assessed.
235. (New) The method of claim 220, wherein the metering step is automated.
236. (New) The method of claim 235, wherein the compression and injection steps are manual.
237. (New) The method of claim 236, wherein the compression and injection steps comprise rotating a crank arm.
238. (New) The method of claim 220, wherein the metering, compression, and injection steps are manual.
239. (New) The method of claim 220, wherein the metering step comprises reciprocation of a metering member through a plurality of strokes.
240. (New) The method of claim 239, wherein the metering member is moveable by a motor.
241. (New) The method of claim 220, further comprising, prior to the metering, compression, and injection steps, affixing the cigarette tube in communication with the compression chamber.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

242. (New) The method of claim 220, further comprising biasing the loose tobacco downward in the hopper.

243. (New) The method of claim 220, wherein the tobacco is injected only after verification that the compressed tobacco in the compression chamber is of a suitable quantity.

244. (New) A method for filling a cigarette tube with tobacco, comprising not necessarily in sequence:

metering loose tobacco from a hopper to a compression chamber;
compressing the loose tobacco in the compression chamber; and
injecting the compressed tobacco from the compression chamber to a cigarette tube in communication with the compression chamber,
wherein the metering and compression steps are both performed using a first member.

245. (New) The method of claim 244, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.

246. (New) The method of claim 245, further comprising assessing the status of a second switch to determine whether the compression is complete.

247. (New) The method of claim 246, further comprising querying the first switch only after the second switch has been engaged.

248. (New) The method of claim 244, wherein the method is automated using a metering/compression motor and an injection motor.

249. (New) The method of claim 248, wherein compression is performed by the first member moveable along a first axis, and wherein the compression member is coupled to the

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

metering/compression motor by a spring which allows the position of the compression member to vary along the first axis in response to a load provided by compressing the tobacco.

250. (New) The method of claim 249, wherein the variance in the position of the compression member in response to the load selectively changes the status of a first switch.

251. (New) The method of claim 250, further comprising assessing the status of a second switch to determine whether the compression is complete.

252. (New) The method of claim 251, further comprising querying the first switch only after the second switch has been engaged.

253. (New) The method of claim 244, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.

254. (New) The method of claim 244, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber during each compression step.

255. (New) The method of claim 244, further comprising automating the movement of the first member and automating the injecting step in accordance with an algorithm.

256. (New) The method of claim 255, wherein the algorithm further assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.

257. (New) The method of claim 256, wherein the algorithm provides for an additional metering step if an insufficient quantity of tobacco has been assessed.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

258. (New) The method of claim 244, wherein the metering step comprises reciprocation of the first member through a plurality of strokes.
259. (New) The method of claim 258, wherein the first member is moveable by a motor.
260. (New) The method of claim 244, further comprising, prior to the metering, compression, and injection steps, affixing the cigarette tube in communication with the compression chamber.
261. (New) The method of claim 244, further comprising biasing the loose tobacco downward in the hopper.
262. (New) The method of claim 244, further comprising automating the movement of the first member and automating the injection step.
263. (New) The method of claim 244, further comprising reciprocating the first member through a plurality of strokes.
264. (New) The method of claim 244, wherein the first member and injection member are manually moveable.
265. (New) The method of claim 244, wherein the first member is moveable along a first axis, and wherein the tobacco is injected along a second axis, and wherein the first and second axes are orthogonal to each other.
266. (New) The method of claim 244, wherein the compression chamber is essentially cylindrical and has a gap on its upper surface, and wherein the first member has an edge which interfaces with the compression chamber at the gap.
267. (New) The method of claim 266, wherein the edge of the first member is semicircular.

Appl. No.: 10/714,359
Amtd. dated Oct. 22, 2004

268. (New) The method of claim 244, wherein the tobacco is injected only after verification that the compressed tobacco in the compression chamber is of a suitable quantity.

269. (New) A method for filling a cigarette tube with tobacco, comprising not necessarily in sequence:

metering loose tobacco from a hopper to a compression chamber by reciprocating through a plurality of linear strokes;
compressing the loose tobacco in the compression chamber; and
injecting the compressed tobacco from the compression chamber to a cigarette tube in communication with the compression chamber.

270. (New) The method of claim 269, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.

271. (New) The method of claim 270, further comprising assessing the status of a second switch to determine whether the compression is complete.

272. (New) The method of claim 271, further comprising querying the first switch only after the second switch has been engaged.

273. (New) The method of claim 269, wherein the metering, compressing, and injecting steps are respectively automated by a metering motor, a compression motor, and an injection motor.

274. (New) The method of claim 273, wherein compression is performed by a compression member moveable along a first axis, and wherein the compression member is coupled to the compression motor by a spring which allows the position of the compression member to vary along the first axis in response to a load provided by compressing the tobacco.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

275. (New) The method of claim 274, wherein the variance in the position of the compression member in response to the load selectively changes the status of a first switch.
276. (New) The method of claim 275, further comprising assessing the status of a second switch to determine whether the compression is complete.
277. (New) The method of claim 276, further comprising querying the first switch only after the second switch has been engaged.
278. (New) The method of claim 269, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.
279. (New) The method of claim 269, wherein the metering and compression steps are performed in alternating fashion prior to the injection step.
280. (New) The method of claim 269, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber during each compression step.
281. (New) The method of claim 269, further comprising automating the metering, compression, and injecting steps in accordance with an algorithm.
282. (New) The method of claim 281, wherein the algorithm further assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.
283. (New) The method of claim 282, wherein the algorithm provides for an additional metering step if an insufficient quantity of tobacco has been assessed.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

284. (New) The method of claim 269, wherein the metering step is automated.
285. (New) The method of claim 284, wherein the compression and injection steps are manual.
286. (New) The method of claim 285, wherein the compression and injection steps comprise rotating a crank arm.
287. (New) The method of claim 286, wherein rotating the crank arm performs the compression step before the injection step.
288. (New) The method of claim 269, wherein the metering, compression, and injection steps are manual.
289. (New) The method of claim 288, wherein the compression and injection steps comprise rotating a crank arm.
290. (New) The method of claim 289, wherein rotating the crank arm performs the compression step before the injection step.
291. (New) The method of claim 269, wherein the metering step comprises reciprocation of a metering member through the plurality of linear strokes.
292. (New) The method of claim 291, wherein the metering member is moveable by a motor.
293. (New) The method of claim 291, wherein the metering member is moveable by a rotating crank arm.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

294. (New) The method of claim 269, wherein the tobacco is metered along a first axis, the tobacco is compressed along a second axis, and the tobacco is injected along a third axis, and wherein the first, second, and third axes are all orthogonal to each other.

295. (New) The method of claim 269, wherein the compression step further comprises affixing the cigarette tube in communication with the compression chamber.

296. (New) The method of claim 269, further comprising, prior to the metering, compression, and injection steps, affixing the cigarette tube in communication with the compression chamber.

297. (New) The method of claim 269, further comprising biasing the loose tobacco downward in the hopper.

298. (New) The method of claim 269, wherein the metering and compression steps are both performed using a first member.

299. (New) The method of claim 298, further comprising assessing the status of a first switch during compression to determine whether a sufficient quantity of tobacco has been compressed in the compression chamber.

300. (New) The method of claim 299, further comprising assessing the status of a second switch to determine whether the compression is complete.

301. (New) The method of claim 300, further comprising querying the first switch only after the second switch has been engaged.

302. (New) The method of claim 298, further comprising automating the movement of the first member and automating the injection step.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

303. (New) The method of claim 302, wherein compression is performed by the first member moving along a first axis, and wherein the first member is coupled to a motor by a spring which allows the position of the first member to vary along the first axis in response to a load provided compressing the tobacco.

304. (New) The method of claim 303, wherein the variance in the position of the first member in response to the load selectively changes the status of a first switch.

305. (New) The method of claim 304, further comprising assessing the status of a second switch to determine whether the compression is complete.

306. (New) The method of claim 305, further comprising querying the first switch only after the second switch has been engaged.

307. (New) The method of claim 298, further comprising determining whether a sufficient quantity of tobacco has been compressed in the compression chamber.

308. (New) The method of claim 298, wherein metering loose tobacco from the hopper to the compression chamber by reciprocating through the plurality of linear strokes comprises reciprocating the first member through the plurality of linear strokes.

309. (New) The method of claim 298, further comprising automating the movement of the first member and automating the injecting step in accordance with an algorithm.

310. (New) The method of claim 309, wherein the algorithm assesses whether a sufficient quantity of tobacco has been compressed in the compression chamber.

311. (New) The method of claim 310, wherein the algorithm provides for additional metering by the first member if an insufficient quantity of tobacco has been assessed.

Appl. No.: 10/714,359
Amdt. dated Oct. 22, 2004

312. (New) The method of claim 298, wherein the first member and injection member are manually moveable.

313. (New) The method of claim 298, wherein the first member is moveable along a first axis, and wherein the tobacco is injected along a second axis, and wherein the first and second axes are orthogonal to each other.

314. (New) The method of claim 298, further comprising biasing the loose tobacco downward in the hopper.

315. (New) The method of claim 298, wherein the compression chamber is essentially cylindrical and has a gap on its upper surface, and wherein the first member has an edge which interfaces with the compression chamber at the gap.

316. (New) The method of claim 315, wherein the edge of the first member is semicircular.

317. (New) The method of claim 269, wherein the tobacco is injected only after verification that the compressed tobacco in the compression chamber is of a suitable quantity.